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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kang-Hyun Jo

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EXAMINER

TORRES, JUAN A

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,507

Applicant(s)

JO ET AL.

Examiner

Juan A. Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Applicant's arguments filed on 02/23/2006 regarding the claim rejections under 35 USC 112 first paragraph, have been fully considered and they are persuasive.

The Examiner withdraws the claim rejections objections under 35 USC 112 first paragraph to claims 1-6 of the previous Office action.

Response to Arguments

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosiec (US 5838202 A) in view of Hietala (US 6327319 B1). (Examiner NOTE: the same rejection could be made using the admitted prior art in figure 2 of the specification regarding also to GSM instead of Hietala).

As per claim 1, Kosiec discloses an apparatus for generating transmission local oscillation signals and reception local oscillation signals in a mobile terminal, comprising a first phase locked loop (PLL) block configured to generate a transmission local oscillation signal (figure 1 block 109; column 1 line 29 to column 2 line 32); a radio

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transmitter portion for receiving the transmission local oscillation signal (figure 1 block 105; column 1 line 29 to column 2 line 32); a second PLL block for generating a reception local oscillation signal (figure 1 block 108; column 1 line 29 to column 2 line 32); a radio reception portion for receiving the reception local oscillation signal (figure 1 block 103; column 1 line 29 to column 2 line 32); and a controller configured to control the first PLL block to operate before a minimum time period required for the first PLL block to lock up from the start point of a transmission burst period, and to control the second PLL block to operate before a minimum time period required for the second PLL block to lock up from the start point of a reception burst period (figure 1 blocks 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Hietala disclose to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Kosiec and Hietala teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 2, Kosiec discloses an apparatus for generating a transmission local oscillation signal and a reception local oscillation signal in a mobile terminal, comprising

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a first PLL block configured to generate the transmission local oscillation signal (figure 1 block 109; column 1 line 29 to column 2 line 32); a radio transmitter portion for receiving the transmission local oscillation signal (figure 1 block 105; column 1 line 29 to column 2 line 32); a second PLL block configured to generate the reception local oscillation signal (figure 1 block 108; column 1 line 29 to column 2 line 32); a radio reception portion for receiving the reception local oscillation signals (figure 1 block 103; column 1 line 29 to column 2 line 32); and a controller for controlling the first PLL block to operate before an end point of a reception burst period for controlling the second PLL block to operate before an end point of a transmission burst period (figure 1 blocks 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose controlling the radio transmitter portion to operate only during a transmission burst period and for controlling the radio reception portion to operate only during a reception burst period. Hietala disclose to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Kosiec and Hietala teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 3, Kosiec discloses a method of generating a transmission local oscillation signal and a reception local oscillation signal in a mobile terminal having a

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first PLL block for generating the transmission local oscillation signal and a second PLL block for generating the reception local oscillation signal (figure 1 blocks 108 and 109; column 1 line 29 to column 2 line 32), comprising controlling the first PLL block to operate before a minimum time period required for the first PLL block to lock up from the start point of a transmission burst period (figure 1 blocks 109, 110 and 118; column 1 line 29 to column 2 line 32); controlling the second PLL block to operate before a minimum time period required for the second PLL block to lock up from the start point of a reception burst period (figure 1 blocks 108, 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose controlling the radio transmitter portion to operate only during a transmission burst period and for controlling the radio reception portion to operate only during a reception burst period. Hietala disclose to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Kosiec and Hietala teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 4, Kosiec and Hietala disclose claim 3. Kosiec also discloses applying the reception local oscillation signal generated from the second PLL block to a radio receiver for the reception burst period (figure 1 block 116; column 1 line 29 to

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column 2 line 32); and applying the transmission local oscillation signal generated from the first PLL block to the radio transmitter for the transmission burst period (figure 1 block 117; column 1 line 29 to column 2 line 32).

As per claim 5 Kosiec discloses a method of generating a transmission local oscillation signal and a reception local oscillation signal in a mobile terminal having a first PLL block for generating the transmission local oscillation signal and a second PLL block for generating the reception local oscillation signal (figure 1 blocks 108 and 109; column 1 line 29 to column 2 line 32) comprising controlling the first PLL block to operate before the end point of a reception burst period (figure 1 blocks 109, 110 and 118; column 1 line 29 to column 2 line 32); controlling the second PLL block to operate before the end point of a transmission burst period (figure 1 blocks 108, 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose controlling the radio transmitter portion to operate only during a transmission burst period and for controlling the radio reception portion to operate only during a reception burst period. Hietala disclose to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Kosiec and Hietala teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

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As per claim 6 Kosiec and Hietala disclose claim 5. Kosiec also discloses applying the reception local oscillation signal generated from the second PLL block to a radio receiver for the reception burst period (figure 1 block 116; column 1 line 29 to column 2 line 32); and applying the transmission local oscillation signal generated from the first PLL block to a radio transmitter for the transmission burst period (figure 1 block 117; column 1 line 29 to column 2 line 32).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Juan Alberto Torres
03-14-2006

2/16/06
TEMESCHEN GHEBRETTINSAF
PRIMARY EXAMINER